

(43) International Publication Date
20 October 2005 (20.10.2005)

PCT

(10) International Publication Number
WO 2005/098501 A1(51) International Patent Classification⁷: G02B 7/28, 7/34, G03B 13/36, H04N 5/335

Hidekazu [JP/JP]; c/o CANON KABUSHIKI KAISHA, 3-30-2, Shimomaruko, Ohta-ku, Tokyo 1468501 (JP).

(21) International Application Number:
PCT/JP2005/007188

(74) Agents: OKABE, Masao et al.; No. 602, Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo 1000005 (JP).

(22) International Filing Date: 7 April 2005 (07.04.2005)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

(26) Publication Language: English

(30) Priority Data:
2004-115629 9 April 2004 (09.04.2004) JP

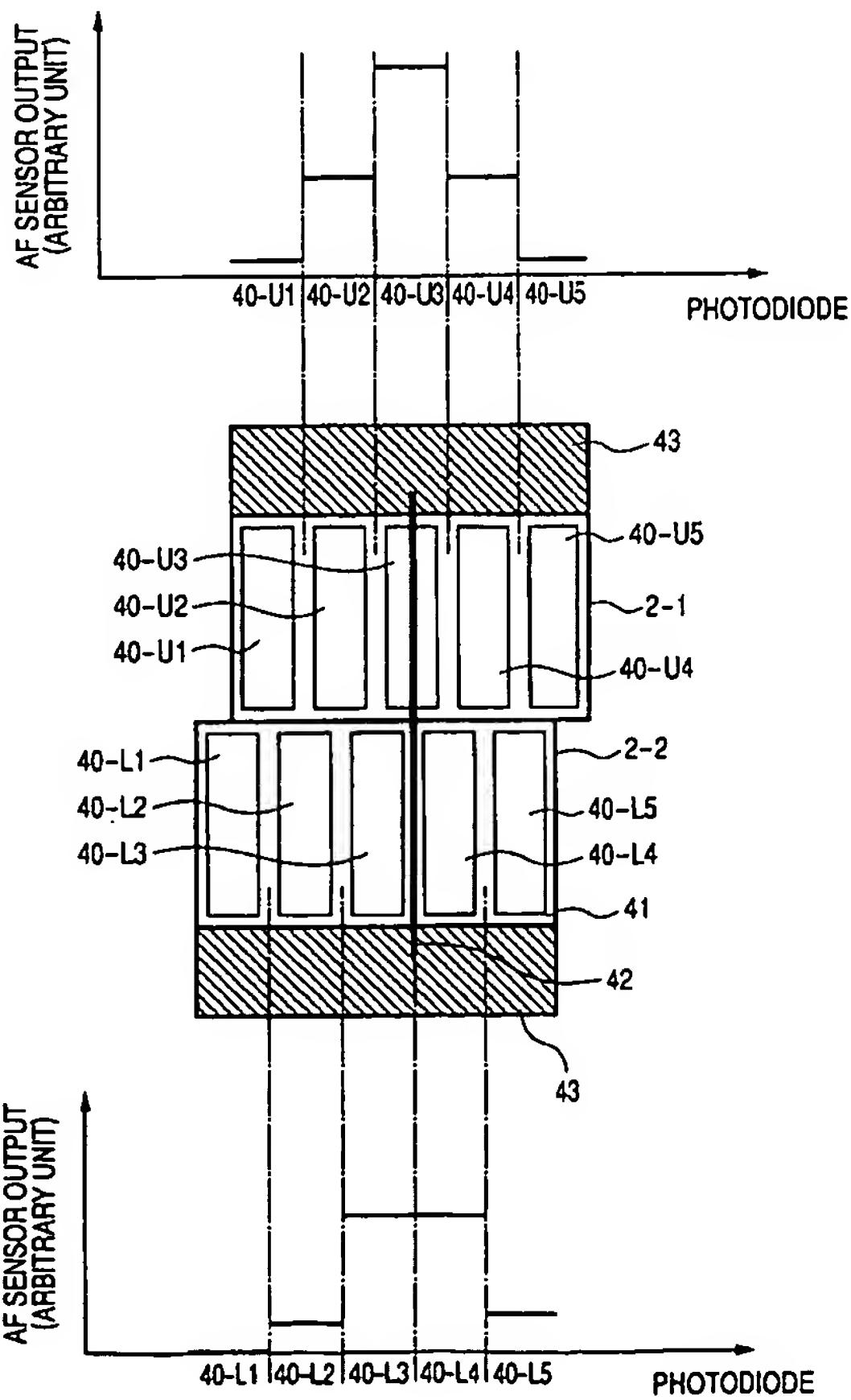
(71) Applicant (for all designated States except US): CANON KABUSHIKI KAISHA [JP/JP]; 3-30-2, Shimomaruko, Ohta-ku, Tokyo 1468501 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): TAKAHASHI,

[Continued on next page]

(54) Title: SOLID-STATE IMAGE PICKUP DEVICE FOR AUTO-FOCUS AND AUTO-FOCUS CAMERA USING THE SAME



(57) Abstract: The invention provides a solid-state image pickup device for an auto-focus and a camera for an auto-focus in which focusing precision is improved. The device has first and second linear sensor pairs (for example, 2-1, 2-2) each having a linear sensor for a base portion with a plurality of pixels and a linear sensor for a reference portion with a plurality of pixels in order to perform a focal point detection of a TTL passive-type phase detection system. The first and second linear sensor pairs have the same pixel pitch, the first and second linear sensor pairs are neighboring in parallel and are arranged so as to be relatively deviated in the arranging direction of the linear sensors, and a signal output to detect the focal point is executed by using both of the first and second linear sensor pairs.

WO 2005/098501 A1

RIGHTS RESERVED COPY



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *with international search report*
- *with amended claims*

BEST AVAILABLE COPY